

Protection and Recovery of Ontario's Species at Risk

2022 Review of
Progress Summary




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Cover Photo - iStockPhoto.com



King Rail - Brian E. Small



Introduction to the 2022 Review of Progress towards the Protection and Recovery of Ontario's Species at Risk

Overview

To fulfill a legislative requirement of the [Endangered Species Act, 2007](#) (ESA), the Government of Ontario publishes a Review of Progress towards the Protection and Recovery of Ontario's Species at Risk. The Review shows how the Government of Ontario and its partners are helping to protect and recover species at risk in Ontario. In 2022, the Review included the following 12 species at risk:

- Acadian Flycatcher
- Bank Swallow
- Blue Racer
- Channel Darter
- Goldenseal
- King Rail
- Kirtland's Warbler
- Lake Erie Watersnake
- Least Bittern
- Loggerhead Shrike
- Small-mouthed Salamander
- Unisexual Ambystoma (Small-mouthed Salamander dependent population)

This document is a summary of the progress made from 2007 to 2021 for the 12 species listed above. Full-length chapters on each species are found in the 2022 Review of Progress towards the Protection and Recovery of Ontario's Species at Risk, which is available on the Government of Ontario website at www.ontario.ca/page/review-progress-towards-protection-and-recovery-ontarios-species-risk

Blue Racer - Joe Crowley

Review of Progress toward the protection and recovery of

Acadian Flycatcher

Progress towards meeting the recovery goal:

The recovery goal in the [Government Response Statement](#) (GRS) for Acadian Flycatcher in Ontario is to “maintain the current population abundance and distribution of the species in Ontario and enable natural increases, where feasible, through habitat management.”

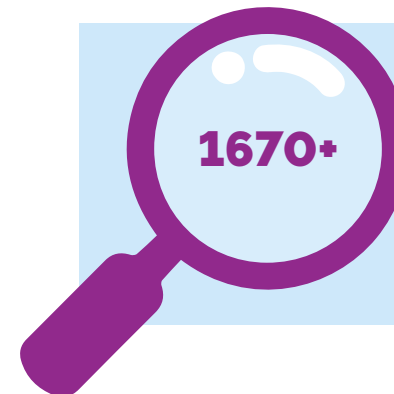
Progress has been made towards implementing all of the government-led actions. Progress has been made towards implementing all of the government-supported recovery objectives and a majority of the associated actions. Examples of progress include:

- The development of site-specific management plans to maintain and improve Acadian Flycatcher habitat.
- Surveying efforts undertaken for Acadian Flycatcher at varying scales across woodland habitats.

In alignment with the GRS, greater efforts are needed to support the securement of Acadian Flycatcher habitat, to develop best management practices around drainage in or adjacent to Acadian Flycatcher habitat, and to conduct research on the potential impacts to Acadian Flycatcher associated with food abundance and diversity.



Acadian Flycatcher - Brian E. Small



**observations of
Acadian Flycatcher
were submitted to
the NHIC since 2008**

Occurrences and distribution:

Acadian Flycatcher is widely distributed across southern Ontario, with an estimated range of approximately 13,800 square kilometres based on recent observations.

The [Natural Heritage Information Centre \(NHIC\)](#) has received over 1,670 records of the species based on observations made between 1909 and 2021.

Since 2008, the species has been observed in locations where they were not previously known to occur and at locations previously thought to be historical.

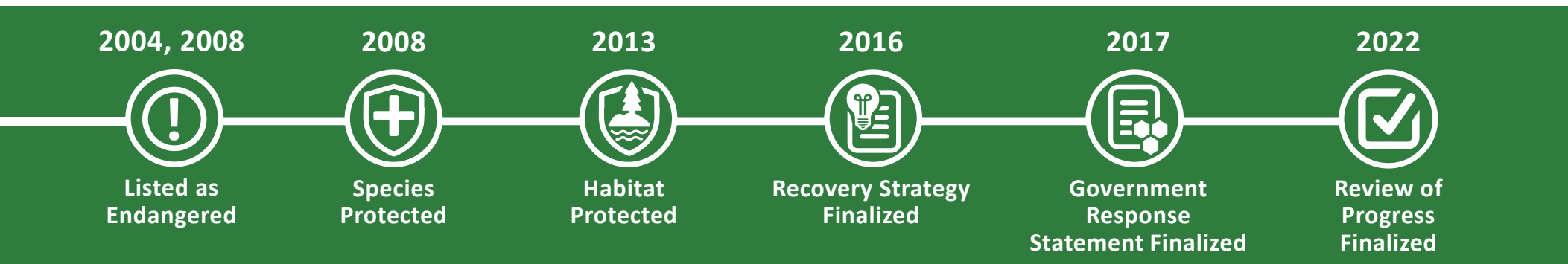
Government-supported stewardship projects:

Through the [Species at Risk Stewardship Program](#) the government has supported 49 projects (\$ 2,873,610) designed to contribute to the protection and recovery of Acadian Flycatcher.

The government's support helped its stewardship partners to involve 6,933 individuals who volunteered 38,909 hours of their time towards protection and recovery activities that benefitted Acadian Flycatcher among other species. The estimated value of these voluntary contributions, as well as additional funding and in-kind support, is \$4,002,902.

Stewardship partners reported that through both their efforts and the efforts of their volunteers to implement GRS actions, they were successful in enhancing 7,537 hectares of habitat that will benefit multiple species at risk, including Acadian Flycatcher.

In addition, stewardship partners reported providing ecosystem-based outreach designed to benefit multiple species at risk, including Acadian Flycatcher, to 769,027 individuals.



Species at Risk Stewardship Program By The Numbers



49

projects included
Acadian Flycatcher



\$2,873,610

for projects that
included
Acadian Flycatcher



\$4,002,902

in additional funding
and in-kind support



6,933

volunteers



38,909

volunteer hours



769,027

people received
outreach



7,537

hectares of habitat
enhanced

Supporting human activities while ensuring appropriate support for species recovery:

The Government of Ontario has issued fourteen 'protection or recovery' permits for this species under clause 17(2)(b) of the ESA.

Fifty-five activities have been registered for the species.

The activities were registered under 'Drainage works (section 23.9), 'Threats to human health and safety, not imminent' (section 23.18), and 'Wind facilities' (section 23.20) under [Ontario Regulation 242/08](#) of the ESA.

Supporting human activities while ensuring appropriate support for species recovery:

[Recovery Strategy for Acadian Flycatcher \(2016\)](#)

[Government Response Statement for Acadian Flycatcher \(2017\)](#)

14

Protection
or Recovery
Permits

55

Registrations

Review of Progress toward the protection and recovery of

Bank Swallow

Progress towards meeting the recovery goal:

The recovery goal in the [Government Response Statement](#) (GRS) for Bank Swallow in Ontario is to “reduce the rate of population decline by minimizing threats and improving habitat conditions. In the long-term, the government’s goal is to maintain a stable and self-sustaining population of Bank Swallow, throughout the species’ range in Ontario by 2037 (within 20 years)”. Progress has been made towards implementing all of the government-led actions. Progress has been made towards implementing all of the government-supported recovery objectives and all of the associated actions.

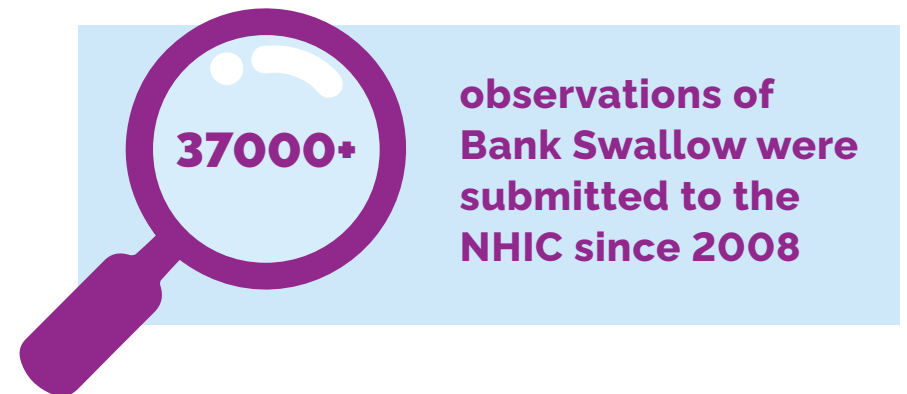
Examples of progress include:

- Development of the [Best Management Practices for the Protection, Creation and Maintenance of Bank Swallow Habitat in Ontario](#), which provides guidance on avoiding and mitigating impacts to Bank Swallow habitat.
- Efforts undertaken to survey for this species in both known and potential habitat areas, expanding understanding of the distribution of this species.

In alignment with the GRS, it is recommended that additional efforts be made to encourage coordinated research into causes of Bank Swallow decline in Ontario, to investigate the characteristics of foraging and roosting habitat, and to conduct standardized surveys in areas with suitable habitat for Bank Swallow.



Bank Swallow - © Donna Pomeroy CC-BY-NC



Occurrences and distribution:

Bank Swallow is widely distributed across Ontario, with an estimated range of approximately 15,250 square kilometres based on recent observations.

The [Natural Heritage Information Centre \(NHIC\)](#) has received over 37,000 records of the species based on observations made between 1892 and 2021, 4,271 of which contain evidence that the birds observed may have been nesting.

Since 2008, the species has been observed in locations where they were not previously known to occur and at locations previously thought to be historical.

Government-supported stewardship projects:

Through the [Species at Risk Stewardship Program](#), the Government of Ontario has enabled its stewardship partners to conduct 16 projects (by providing \$974,583 in funding) that have supported the protection and recovery of Bank Swallow.

The government's support helped its stewardship partners to involve 1,273 individuals who volunteered 15,629 hours of their time towards protection and recovery activities for species at risk, including Bank Swallow. The estimated value of these voluntary contributions, as well as additional funding and in-kind support, is \$326,143.

Stewardship partners reported that through their actions 81 hectares of habitat were enhanced for Bank Swallow and other species at risk that inhabit the same ecosystem.

Stewardship partners reported providing outreach on multiple species at risk, including Bank Swallow, to 304,607 individuals.

Species at Risk Stewardship Program By The Numbers



16

projects included
Bank Swallow



\$974,583

for projects that included
Bank Swallow



\$326,143

in additional funding
and in-kind support



1,273

volunteers



15,629

volunteer hours



304,607

people received
outreach



81

hectares of habitat
enhanced

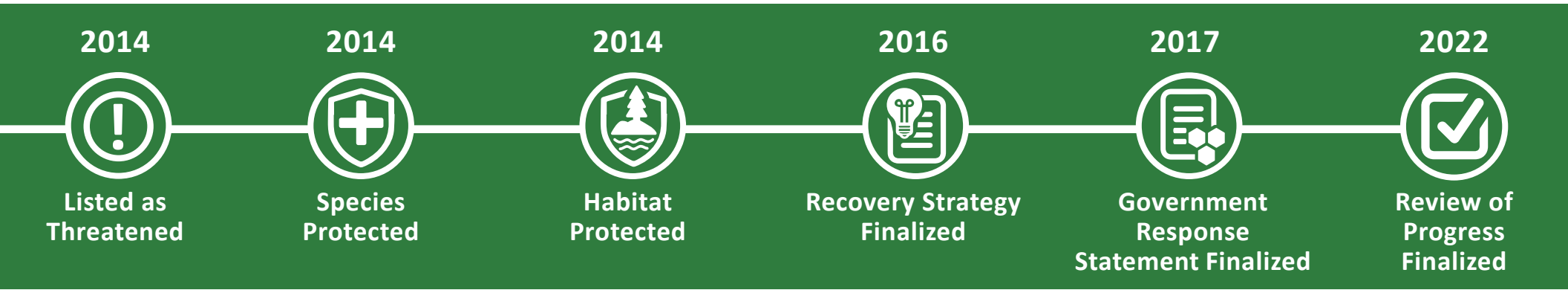
Supporting human activities while ensuring appropriate support for species recovery

The Government of Ontario has issued 19 permits for this species: one ‘human health and safety’ permit was issued under clause 17(2)(a), five ‘social and economic benefit’ permits were issued under clause 17(2)(d), and 13 ‘protection or recovery’ permits under clause 17(2)(b) of the ESA.

Two-hundred and sixty-nine activities have been registered for the species. The activities were registered under ‘Drainage works’ (section 23.9), ‘Early exploration and mining’ (section 23.10), ‘Pits and quarries’ (section 23.14), ‘Possession for education purposes, etc.’ (section 23.15), ‘Species protection, recovery activities’ (section 23.17), ‘Threats to human health and safety, not imminent’ (section 23.18), ‘Transition – development ongoing when species first listed, etc.’ (section 23.13), and ‘Wind facilities’ (section 23.20) under [Ontario Regulation 242/08](#) of the ESA, and under [Ontario Regulation 830/21](#) of the ESA.

Species-specific documents and guidance published by the government:

- [General Habitat Description for Bank Swallow \(2015\)](#)
- [Recovery Strategy for Bank Swallow \(2016\)](#)
- [Government Response Statement for Bank Swallow \(2017\)](#)



Review of Progress toward the protection and recovery of

Blue Racer, Lake Erie Watersnake, Small-mouthed Salamander & Unisexual Ambystoma

Progress towards meeting the recovery goal:

The recovery goal in the [Government Response Statement](#) (GRS) for Blue Racer in Ontario is to maintain the species' distribution and ensure a viable, self-sustaining population.

The recovery goal in the GRS for Lake Erie Watersnake in Ontario is to maintain the current abundance and distribution of the species in Ontario.

The recovery goal in the GRS for Small-mouthed Salamander and Unisexual Ambystoma (Small-mouthed Salamander dependent population) in Ontario is to ensure long-term viability and persistence of the Ontario populations by managing threats and increasing population abundance, distribution and connectivity.

Progress has been made towards implementing the majority of the government-led actions. Progress has also been made towards implementing all of the government-supported recovery objectives and the majority of the associated actions. Examples of progress to-date include:

- Extensive stewardship efforts carried out by the Nature Conservancy of Canada (NCC), which have been supported through the Species at Risk Stewardship Program (SARSP). Over the past decade, the NCC has managed, restored and created over 100 hectares of habitat for Blue Racer, Lake Erie Watersnake, Small-mouthed Salamander and the Unisexual Ambystoma (Small-mouthed Salamander dependent population) across Pelee Island.



Blue Racer - Joe Crowley

- Survey and monitoring programs have been implemented by SARSP partners for the Blue Racer, Small-mouthed Salamander and Unisexual Ambystoma (Small-mouthed Salamander dependent population), which have greatly improved our understanding of species' distributions and population trends.
- A long-term, multi-faceted survey, monitoring and research program for the Small-mouthed Salamander and Unisexual Ambystoma (Small-mouthed Salamander dependent population) was initiated by Trent University in 2015, with support through the SARSP. This work, which is ongoing, has been systematically addressing most of the knowledge gaps identified in the GRS for these SAR salamanders.

Based on progress to date, the overall direction provided in the GRS should continue to guide recovery efforts for the Blue Racer, Lake Erie Watersnake, Small-mouthed Salamander and Unisexual Ambystoma, with particular focus on the actions identified as high priority.

Occurrences and distribution:

Blue Racer, Lake Erie Watersnake, Small-mouthed Salamander and Unisexual Ambystoma (Small-mouthed Salamander dependent) occur on Pelee Island in Western Lake Erie.

Blue Racer has a range of approximately 34 square kilometres on Pelee Island based on recent observations, and was historically distributed across an additional 26 square kilometers. There are 265 historical observations of the Blue Racer on the mainland of Ontario, where the species is considered to be extirpated. Since 2008, the species has been observed in seven additional square kilometers in which it was not previously known to occur. The species' presence has been re-confirmed in three square kilometers that were considered to be historical in 2008, while 13 square kilometers have changed from extant to historical based on a lack of recent observations.

Lake Erie Watersnake has a range of approximately 62 square kilometres based on recent observations of the species, and a total range of 71 square kilometres when historical observations are included. Since 2008, the species' presence has been re-confirmed in five square kilometers, the species has been observed in 12 additional square kilometers in which it was not previously known to occur, and three square kilometers have changed from extant to historical based on a lack of observations.

Nine populations of Small-mouthed Salamander have been documented on Pelee Island. Seven of these populations are extant, whereas the remaining two are considered historical. Since 2008, four populations have been newly identified as a result of recent survey and monitoring work.

Ten populations of Unisexual Ambystoma (Small-mouthed Salamander dependent population) have been documented on Pelee Island. Currently, seven of these populations are extant, one is considered to be historical, and the remaining two are locally extirpated. Since 2008, the status of one population changed from extant to historical based on the date that it was last observed, while four populations were newly identified as a result of recent survey and monitoring work.



observations of Lake Erie Watersnake were submitted to the NHIC since 2008



Small-mouthed Salamander - Tom Hossie



**observations of
Small-mouthed
Salamander were
submitted to the
NHIC since 2008**

Government-supported stewardship projects:

Through the [Species at Risk Stewardship Program](#), the Government of Ontario has enabled its stewardship partners to conduct 29 projects (by providing \$2,417,377 in funding) that have supported the protection and recovery of Blue Racer, Lake Erie Watersnake, Small-mouthed Salamander, and Unisexual Ambystoma (Small-mouthed Salamander dependent population). Three of these projects focussed exclusively on Blue Racer (\$278,003), five focussed exclusively on Small-mouthed Salamander and Unisexual Ambystoma (Small-mouthed Salamander dependent population) (\$406,797), and one focussed exclusively on Lake Erie Watersnake (\$6,395), while the other 20 projects (\$1,726,181) focused on multiple species at risk, including Blue Racer, Lake Erie Watersnake, Small-mouthed Salamander and Unisexual Ambystoma (Small-mouthed Salamander dependent population).

The government's support helped its stewardship partners to involve 31,932 individuals who volunteered 31,043 hours of their time towards protection and recovery activities for species at risk, including Blue Racer, Lake Erie Watersnake, Small-mouthed Salamander and Unisexual Ambystoma (Small-mouthed Salamander dependent population). The estimated value of these voluntary contributions, as well as additional funding and in-kind support, is \$2,447,586.

Stewardship partners reported that through their actions 167 hectares of habitat were enhanced for Blue Racer, Lake Erie Watersnake, Small-mouthed Salamander and Unisexual Ambystoma (Small-mouthed Salamander dependent population).

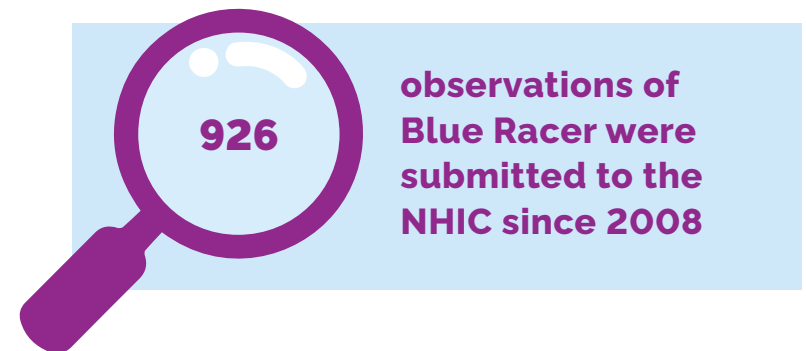
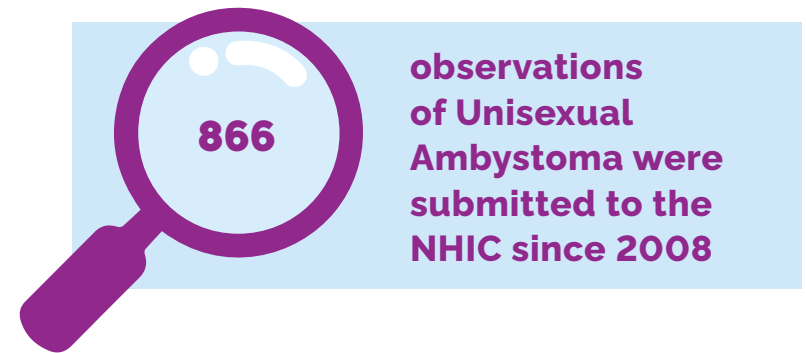
Stewardship partners reported providing outreach on multiple species at risk, including Blue Racer, Lake Erie Watersnake, Small-mouthed Salamander and Unisexual Ambystoma (Small-mouthed Salamander dependent population), to 65,822 individuals.

Supporting human activities while ensuring appropriate support for species recovery

The Government of Ontario has issued six permits for Blue Racer (three 'protection or recovery' permits were issued under clause 17(2)(b), and three 'overall benefit' permits were issued under clause 17(2)(c) of the ESA) and four permits for Lake Erie Watersnake (one 'protection or recovery' permit was issued under clause 17(2)(b) and three 'overall benefit' permits were issued under clause 17(2)(c) of the ESA). To date, no permits have been issued for Small-mouthed Salamander or Unisexual Ambystoma (Small-mouthed Salamander dependent population).

One agreement was entered into for multiple species at risk that included Blue Racer, Lake Erie Watersnake and Small-mouthed Salamander. This agreement was enabled through Ontario Regulation 242/08 (prior to the July 1, 2013 amendment).

Sixteen activities have been registered for Blue Racer for the purposes of Ontario Regulation 242/08 under the ESA, with seven activities registered under 'Drainage works' (section 23.9), one registered under 'Ecosystem protection' (section 23.11), six registered under 'Species protection, recovery activities' (section 23.17), and two registered under 'Threats to human health and safety, not imminent' (section 23.18). Six activities have been registered for Lake Erie Watersnake, with two registered under 'Drainage works' (section 23.9), three registered under 'Species protection, recovery activities' (section 23.17), and one registered under 'Threats to human health and safety, not imminent' (section 23.18). Sixteen activities have been registered for Small-mouthed Salamander and Unisexual Ambystoma (Small-mouthed Salamander dependent population), with two activities registered under 'Ecosystem protection' (section 23.11), one registered under 'Transition - development ongoing when species first listed, etc.' (section 23.13), and 13 registered under 'Species protection, recovery activities' (section 23.17).



Species-specific documents and guidance published by the government:

[Recovery Strategy for Blue Racer \(2015\)](#)

[Recovery Strategy for Lake Erie Watersnake \(2015\)](#)

[Recovery Strategy for Small-mouthed Salamander and Unisexual Ambystoma \(Small-mouthed Salamander dependent population\) \(2018\)](#)

[Government Response Statement for Blue Racer, Lake Erie Watersnake, Small-mouthed Salamander and Unisexual Ambystoma \(Small-mouthed Salamander dependent population\) \(2019\)](#)

Species at Risk Stewardship Program By The Numbers



29

projects included Blue Racer, Lake Erie Watersnake, Small-mouthed Salamander, Unisexual Ambystoma (Small-mouthed Salamander population dependent)



\$2,417,377

for multi-species projects that included Blue Racer, Lake Erie Watersnake, Small-mouthed Salamander, Unisexual Ambystoma (Small-mouthed Salamander population dependent)



\$2,447,586

in additional funding and in-kind support



31,932

volunteers



31,043

volunteer hours



65,822

people received outreach



167

hectares of habitat enhanced



Overall Benefit Permits



Protection or Recovery Permits



Agreements



Registrations

Blue Racer

1973, 2008



Listed as Endangered

1973



Species Protected

2008



Habitat Protected

2015



Recovery Strategy Finalized

2019



Government Response Statement Finalized

2022



Review of Progress Finalized

Lake Erie Watersnake

1977, 2008



Listed as
Endangered

1977-2017



Species
Protected

2008-2017



Habitat
Protected

2015



Recovery
Strategy
Finalized

2017



Listed as
Special
Concern

2017



Species and
Habitat
Protection
Removed

2019



Government
Response
Statement
Finalized

2022



Review of
Progress
Finalized

Small-mouthed Salamander

2000



Listed as
Threatened

2005, 2008



Listed as
Endangered

2000, 2008



Species
Protected

2013



Habitat
Protected

2018



Recovery Strategy
Finalized

2019



Government
Response
Statement
Finalized

2022



Review of
Progress
Finalized

Unisexual Ambystoma

2017



Listed as
Endangered

2017



Species
Protected

2017



Habitat
Protected

2018



Recovery Strategy
Finalized

2019



Government
Response
Statement
Finalized

2022



Review of
Progress
Finalized

Review of Progress toward the protection and recovery of

Channel Darter

Progress towards meeting the recovery goal

The recovery goal in the [Government Response Statement](#) (GRS) for Channel Darter in Ontario is to “maintain existing self-sustaining populations in Ontario and support natural increases in abundance through threat mitigation”. Progress has been made towards implementing all of the government-led actions. Progress has been made towards implementing all of the government-supported recovery objectives and a majority of the associated actions. Examples of progress include:

- Maintaining or improving the quality of Channel Darter habitat in Ontario through projects led by Ontario Parks, stewardship projects funded through the Species at Risk Stewardship Program, and through the Canadian Agricultural Partnership: Cost Share Funding environmental stewardship funding programs for farmers by the Ministry of Agriculture, Food and Rural Affairs. Surveys of potential habitat areas to determine if there are additional unidentified populations.
- Research conducted to better understand the instream flow needs of spawning Channel Darter along the Trent River, in collaboration with Parks Canada, as well as research conducted to determine the potential impact of Round Goby on Channel Darter through a multi-year study.
- Collaborations with the Fisheries and Oceans Canada to promote and distribute the ‘Baitfish Primer’ to anglers and commercial bait operators to help educate them on how to identify baitfish species from other species including Species at Risk and Invasive Species.



Channel Darter - George Coker

In alignment with the GRS, it is recommended that efforts continue to fill knowledge gaps and mitigate threats to the species. Research should continue to determine the habitat needs of all life-stages and threats to the species, and will help to inform the development of a standardized protocol and additional best management practices.



**observations of
Channel Darter were
submitted to the
NHIC since 2008**

Occurrences and distribution:

Twenty-one populations of Channel Darter have been documented in southern Ontario. Currently, 17 of these populations are extant, whereas the remaining four are considered historical.

Since 2008, the status of one population changed from extant to historical based on the date that it was last observed, while two populations were updated from historical to extant as their existence was confirmed through survey efforts. Three populations of Channel Darter have been newly-identified since 2008.

Government-supported stewardship projects:

Through the [Species at Risk Stewardship Program](#), the Government of Ontario has enabled its stewardship partners to conduct 16 projects (\$677,821 in funding) that have supported the protection and recovery of Channel Darter.

The government's support helped its stewardship partners to involve 783 individuals who volunteered 4932 hours of their time towards protection and recovery activities for species at risk, including Channel Darter. The estimated value of these voluntary contributions, as well as additional funding and in-kind support, is \$1,063,386.

Stewardship partners reported that through their actions 410 hectares of habitat were enhanced for Channel Darter.

Stewardship partners reported providing outreach on multiple species at risk, including Channel Darter, to 139,905 individuals.

Species at Risk Stewardship Program By The Numbers



16

projects included
Channel Darter



\$677,821

for projects that
included Channel
Darter



\$1,063,386

in additional funding
and in-kind support



783

volunteers



4,932

volunteer hours



139,905

people received
outreach



410

hectares of habitat
enhanced

Supporting human activities while ensuring appropriate support for species recovery

The Government of Ontario has issued 10 ‘protection or recovery’ permits for this species under clause 17(2)(b) of the ESA.

Eight drainage agreements were entered into for Channel Darter. These agreements were enabled through [Ontario Regulation 242/08](#) (prior to the July 1, 2013 amendment).

One hundred and sixteen activities have been registered for the species. The activities were registered under ‘Aquatic species’ (section 23.4), ‘Drainage works’ (section 23.9), ‘Hydro-electric generating stations and dams’ (section 23.12), ‘Species protection, recovery activities’ (section 23.17), and ‘Threats to human health and safety, not imminent’ (section 23.18) under Ontario Regulation 242/08 of the ESA.

Species-specific documents and guidance published by the government:

- [Recovery Strategy for Channel Darter \(2016\)](#)
- [Government Response Statement for Channel Darter \(2017\)](#)



Review of Progress toward the protection and recovery of

Goldenseal

Progress towards meeting the recovery goal:

The recovery goal in the [Government Response Statement](#) (GRS) for Goldenseal in Ontario is to “maintain self-sustaining populations of Goldenseal throughout its current distribution in Ontario, and to support natural increases in its abundance through effective threat mitigation”.

Progress has been made towards implementing a majority of government-led actions. Progress has been made towards implementing two of the government-supported recovery objectives and two of the associated actions. Examples of progress include:

- Monitoring 10 populations of Goldenseal and their habitat.
- Increasing awareness of Goldenseal among private landowners.

In alignment with the GRS, further work is required to conduct research on Goldenseal demographics, ecology and habitat requirements, to monitor Goldenseal populations in Ontario that have not been subject to monitoring recently, and continue to monitor other populations, and to work collaboratively to develop, implement and evaluate the effectiveness of site management plans for Goldenseal.



Goldenseal - Holly Bickerton



**observations of
Goldenseal were
submitted to the
NHIC since 2008**

Occurrences and distribution:

A total of 30 populations of Goldenseal have been documented in southern Ontario, 16 of which are considered to be extant, 12 historical, one possibly extirpated, and one extirpated.

Since 2008, 11 newly-identified populations have been recorded, representing populations documented from locations where it was previously unknown, populations recognized as distinct and split from known populations, and records of previously-discovered populations being shared with government. These additional recorded populations are not believed to represent an increase in the number of populations in Ontario, but likely result from increased search effort and improved knowledge of the number of populations.

New information has also resulted in some subpopulations being combined and a change to one population from extirpated to historical, while reduced monitoring has resulted in four previously extant populations now being considered historical.

Government-supported stewardship projects:

Through the [Species at Risk Stewardship Program](#), the Government of Ontario has enabled its stewardship partners to conduct eight projects by providing \$18,508 in funding that supported the protection and recovery of Goldenseal.

The government’s support helped its stewardship partners to involve seven individuals who volunteered 70 hours of their time towards protection and recovery activities for Goldenseal. The estimated value of these voluntary contributions, as well as additional funding and in-kind support, is \$44,691.

Stewardship partners reported providing outreach on Goldenseal to 245 individuals.



Species at Risk Stewardship Program By The Numbers



8

projects included
Goldenseal



\$18,508

for projects that
included Goldenseal



\$44,691

in additional funding
and in-kind support

Supporting human activities while ensuring appropriate support for species recovery

Thirteen activities have been registered for the species. The activities were registered under 'Threats to health and safety, not imminent' (section 23.18) under [Ontario Regulation 242/08](#) of the ESA.



7

volunteers



70

volunteer hours



245

people received
outreach

Species-specific documents and guidance published by the government:

[Recovery Strategy for Goldenseal \(2016\)](#)

[Government Response Statement for Goldenseal \(2017\)](#)

13

Registrations

Review of Progress toward the protection and recovery of

King Rail & Least Bittern

Progress towards meeting the recovery goal:

The recovery goal for King Rail in the [*Government Response Statement*](#) (GRS) is to “maintain the persistence of the species in Ontario, by reducing threats to the species and its habitat”. The recovery goal for Least Bittern in the GRS is to “maintain the current distribution and abundance in Ontario, and where feasible, enable increases by reducing threats to the species and its habitat.” Progress has been made towards implementing the majority of the government-led actions. Progress has been made towards implementing all government-supported recovery objectives and several associated actions. Examples of progress include:

- Species and habitat surveys that have resulted in detections of King Rail and Least Bittern.
- Land securement initiatives that supported the protection of Least Bittern habitat.
- Efforts to create, restore and manage wetland habitat for species at risk across southern and central Ontario, which may support the recovery of these wetland-dependent species.

In alignment with the GRS, further recovery efforts should focus on filling knowledge gaps about these species and their threats through dedicated research and monitoring. Actions to reduce known threats to the species and information sharing with other jurisdictions are also needed to ensure that the recovery goals for these species are met.



King Rail - Brian E. Small



Least Bittern- Brian E. Small

Occurrences and distribution:

King Rail and Least Bittern occur in wetlands across southern and central Ontario. Least Bittern also occurs in northwestern Ontario near Lake of the Woods and Dryden.

King Rail occurrence summary:

- This species has an estimated distribution of 350 square kilometres based on recent observations, and was historically distributed across an additional 550 square kilometres.
- The [Natural Heritage Information Centre](#) (NHIC) has received 375 records of the species based on observations made between 1882 and 2019.
- Since 2008, the species has been observed in 17 locations where it was not previously known to occur, including five locations where the species has not been previously found. Based on the most up-to-date information available, the species' extant distribution is estimated to encompass an area 50 square kilometres larger than was known when the ESA came into effect. The species has also been re-confirmed at 12 locations.

Least Bittern occurrence summary:

- This species has an estimated distribution of 6,250 square kilometres based on recent observations, and was historically distributed across an additional 1,120 square kilometres.
- The [Natural Heritage Information Centre](#) (NHIC) has received over 9,500 records of the species based on observations made between 1891 and 2021.
- Since 2008, the species has been observed in 281 locations where it was not previously known to occur. Based on the most up-to-date information available, the species' extant distribution is estimated to encompass an area 2,810 square kilometres larger than was known when the ESA came into effect. The species has also been re-confirmed at 270 locations.

Increases in the species' distributions may be the result of increased search effort and education about King Rail and Least Bittern and do not necessarily represent an expansion of these species' distributions.

Government-supported stewardship projects:

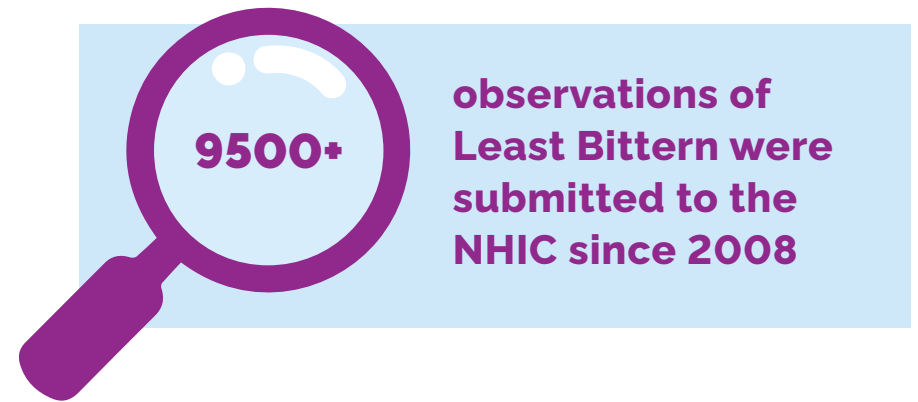
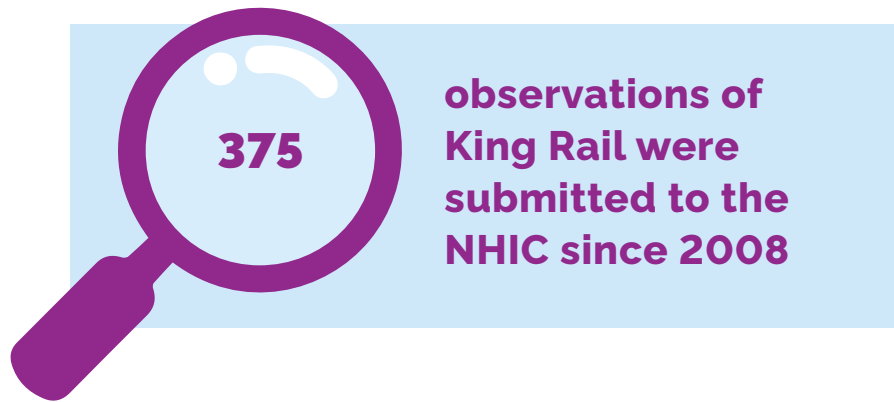
Through the [Species at Risk Stewardship Program](#), the Government of Ontario has enabled its stewardship partners to conduct 90 projects (by providing \$2,797,722 in funding) that have supported the protection and recovery of King Rail and Least Bittern.

The government's support helped its stewardship partners to involve 8,658 individuals who volunteered 41,442 hours of their time towards protection and recovery activities for King Rail and Least Bittern. Another eight individuals volunteered 276 hours of their time towards protection and recovery activities that focused exclusively on Least Bittern. The estimated value of these voluntary contributions, as well as additional funding and in-kind support, is \$5,193,554.

Through the Species at Risk Stewardship Program 2,873 hectares of wetland habitat was created, restored and managed that will benefit King Rail and Least Bittern.

Stewardship partners reported providing outreach on multiple species at risk, including King Rail and Least Bittern, to 2,031,987 individuals.

Through the Species at Risk Research Fund for Ontario, the Government of Ontario supported a research partner to identify Least Bittern breeding sites in the Long Point region and conduct habitat assessments for the Least Bittern.



King Rail

1999, 2008



Listed as
Endangered

1999



Species
Protected

2008



Habitat
Protected

2016



Recovery Strategy
Finalized

2017



Government
Response
Statement Finalized

2022



Review of
Progress
Finalized

Least Bittern

2000



Listed as
Vulnerable

2008



Listed as
Threatened

2008



Species
Protected

2013



Habitat
Protected

2016



Recovery Strategy
Finalized

2017



Government
Response
Statement Finalized

2022



Review of
Progress
Finalized

Species at Risk Stewardship Program By The Numbers



90

projects included
King Rail and
Least Bittern



\$2,797,722

for multi-species projects
that included King Rail and
Least Bittern



\$5,193,554

in additional funding
and in-kind support



8,658

volunteers



41,442

volunteer hours



2,031,987

people received
outreach



2,873

hectares of habitat
enhanced

Supporting human activities while ensuring appropriate support for species recovery

The Government of Ontario has issued nineteen permits for this species: one 'human health and safety' permit was issued under clause 17(2)(a), seventeen 'protection or recovery' permits were issued under clause 17(2)(b), and one 'overall benefit' permit was issued under clause 17(2)(c) of the ESA.

Nineteen agreements were entered into for King Rail and Least Bittern. These agreements were enabled through [Ontario Regulation 242/08](#) (prior to the July 1, 2013 amendment).

Two hundred and fifty-nine activities have been registered for the species. The activities were registered under "Drainage works" (section 23.9), "Early exploration mining" (section 23.10), "Ecosystem protection" (section 23.11), "Pits and quarries" (section 23.14), "Safe harbour habitat" (section 23.16), "Species protection, recovery activities" (section 23.17), "Threats to human health and safety, not imminent" (section 23.18), and "Wind facilities" (section 23.20) under [Ontario Regulation 242/08](#) of the ESA.

Species-specific documents and guidance published by the government:

[Recovery Strategy for King Rail \(2016\)](#)

[Recovery Strategy for Least Bittern \(2016\)](#)

[Government Response Statement for King Rail and Least Bittern \(2017\)](#)



Health or
Safety Permit



Protection or
Recovery Permits



Agreements



Registrations



Overall Benefit
Permits

Review of Progress toward the protection and recovery of

Kirtland's Warbler

Progress towards meeting the recovery goal:

The recovery goal in the [Government Response Statement](#) (GRS) for Kirtland's Warbler in Ontario is to "maintain the persistence of the species in Ontario at locations with confirmed breeding, through habitat management". Progress has been made towards implementing all of the government-led actions. Progress has been made towards implementing one of the government-supported recovery objectives and one of the associated actions. Examples of progress include:

- Conducting monitoring at one of the two Ontario locations with confirmed Kirtland's Warbler breeding to detect changes in the population.
- Conducting monitoring at another location, where Kirtland's Warbler has been detected in the breeding season following the establishment of young Jack Pine (*Pinus banksiana*) stands, to determine if there is a third breeding population in Ontario.



**observations
of Kirtland's
Warbler were
submitted to the
NHIC since 2008**



Kirtland's Warbler - Brian E. Small

In alignment with the GRS, further work is required to:

- Work collaboratively with public and private land owners, land managers, species specialists, forestry professionals and stewardship organizations to develop, implement and evaluate site-specific habitat management plans in areas where the species has been observed, in particular, locations with confirmed breeding.
- Conduct research to determine the extent to which brood parasitism is affecting Kirtland's Warbler in Ontario.
- Conduct research to determine the preferred breeding habitat characteristics of Kirtland's Warbler, including microclimate and structural features.

Occurrences and distribution:

Two extant breeding populations of Kirtland's Warbler have been confirmed in Ontario, both on military bases; the best documented one being at Garrison Petawawa. There is also relatively strong evidence of a possible breeding population at Packard Tract in Simcoe County and weaker evidence of possible breeding populations at two other locations.

Government-supported stewardship projects:

Through the [Species at Risk Stewardship Program](#), the Government of Ontario has enabled its stewardship partners to conduct one project that supported the protection and recovery of Kirtland's Warbler.

Species-specific documents and guidance published by the government:

[Recovery Strategy for Kirtland's Warbler \(2016\)](#)

[Government Response Statement for Kirtland's Warbler \(2017\)](#)

Supporting human activities while ensuring appropriate support for species recovery

The Government of Ontario has issued thirteen 'protection or recovery' permits for this species under clause 17(2)(b) of the ESA.

No agreements were entered into for Kirtland's Warbler. If any agreements had been entered into, they would have been enabled through [Ontario Regulation 242/08](#) (prior to the July 1, 2013 amendment).

Six activities have been registered for the species. The activities were registered under Threats to health and safety, not imminent' (section 23.18) under Ontario Regulation 242/08 of the ESA.

Species at Risk Stewardship Program By The Numbers



1

project included
Kirtland's Warbler

13

Protection
or Recovery
Permits

6

Registrations

1977, 2008



Listed as
Endangered

1977



Species
Protected

2008



Habitat
Protected

2016



Recovery Strategy
Finalized

2017



Government
Response
Statement Finalized

2022



Review of
Progress
Finalized

Review of Progress toward the protection and recovery of

Loggerhead Shrike

Progress towards meeting the recovery goal:

The short-term recovery goal in the [Government Response Statement](#) (GRS) for Loggerhead Shrike in Ontario is to maintain persistence of the species in Ontario while filling knowledge gaps related to threats. The long-term recovery goal is to maintain consistent breeding of Loggerhead Shrike in at least two core areas in Ontario by minimizing threats and maintaining suitable habitat conditions.

Progress has been made towards implementing the majority of the government-led actions. Progress has been made towards implementing all of the government-supported recovery objectives and all of the associated actions. Examples of progress include:

- Radio-tagging and banding efforts that have uncovered Loggerhead Shrike migratory routes and wintering grounds.
- Habitat stewardship activities that have maintained, created and enhanced over 3,600 hectares of Loggerhead Shrike habitat.
- Captive Loggerhead Shrike breeding and release of over 1,300 individuals since 2003.

In alignment with the GRS, further work is needed to conduct research on threats to the species (particularly along migratory routes and on wintering grounds), secure additional Loggerhead Shrike habitat in Ontario, and determine the genetic composition of captive Loggerhead Shrike individuals in Ontario.



Loggerhead Shrike - iStockPhoto.com



5800+

**observations of
Loggerhead Shrike
were submitted to
the NHIC since 2008**

Occurrences and distribution:

In Ontario, Loggerhead Shrike prefers pasture or other grasslands with short grass and scattered dense trees and shrubs. Core breeding areas are located in the Carden Plain and Napanee Limestone Plain, but other isolated breeding locations have been found in the province.

In 2021, 24 breeding pairs were confirmed in Ontario by Wildlife Preservation Canada, representing an increase from 2014 (14 pairs) and 2016 (18 pairs). This species has a distribution of 580 square kilometres based on recent observations, and an additional 1,500 square kilometres of historical habitat.

The [Natural Heritage Information Centre](#) (NHIC) has received over 5,800 records of the species based on observations made between 1906 and 2021. Since 2008, the species has been observed in 12 locations where it was not previously known to occur, mainly near the core breeding area in the Carden Plain.

Government-supported stewardship projects:

Through the [Species at Risk Stewardship Program](#), the Government of Ontario has enabled its stewardship partners to conduct 53 projects (by providing \$2,331,529 in funding) that have supported the protection and recovery of Loggerhead Shrike.

The government's support helped its stewardship partners to involve 2,055 individuals who volunteered 25,674 hours of their time towards protection and recovery activities for Loggerhead Shrike. The estimated value of these voluntary contributions, as well as additional funding and in-kind support, is \$5,673,578.

Stewardship partners reported that through their actions, 3,613 hectares of habitat were enhanced for Loggerhead Shrike exclusively and 3,134 hectares of habitat were enhanced for Loggerhead Shrike and other species at risk that inhabit the same ecosystem.

Stewardship partners reported providing outreach on multiple species at risk, including Loggerhead Shrike, to 130,797 individuals (e.g. by publishing newsletters and articles that provide updates on Loggerhead Shrike research).

Through the Species at Risk Research Fund for Ontario, the Government of Ontario supported two research partners to conduct research on Loggerhead Shrike migration, habitat requirements, demographics, and captive-breeding and release strategies.

Species at Risk Stewardship Program By The Numbers



53

projects included
Loggerhead Shrike



\$2,331,529

for projects that included
Loggerhead Shrike



\$5,673,578

in additional funding
and in-kind support



2,055

volunteers



25,674

volunteer hours



130,797

people received
outreach



6,747

hectares of habitat
enhanced

Supporting human activities while ensuring appropriate support for species recovery

The Government of Ontario has issued two “overall benefit” permits for this species under clause (17(2)(c)) of the ESA, and thirteen ‘protection and recovery’ permits under clause 17(2)(b) of the ESA.

Four aggregate agreements were entered into for Loggerhead Shrike. These agreements were enabled through [Ontario Regulation 242/08](#) (prior to the July 1, 2013 amendment) under the ESA.

One hundred and seventy-nine activities have been registered for the species. The activities were registered under “Drainage works” (section 23.9), “Ecosystem protection” (section 23.11), “Pits and quarries” (section 23.14), “Species protection, recovery activities” (section 23.17), “Threats to human health and safety, not imminent” (section 23.18), and “Wind facilities” (section 23.20) under Ontario Regulation 242/08 of the ESA.

Species-specific documents and guidance published by the government:

[Recovery Strategy for Loggerhead Shrike \(2016\)](#)

[Government Response Statement for Loggerhead Shrike \(2017\)](#)

[General Habitat Description for Loggerhead Shrike \(2017\)](#)

